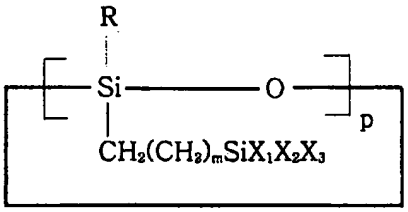
AMENDMENTS TO THE CLAIMS

1. A siloxane-based resin prepared by hydrolyzing and polycondensing a cyclic siloxane compound of formula (1), together with a silane compound of formula (3) ~~and/or~~ or by hydrolyzing and polycondensing the cyclic siloxane compound of formula (1) together with the silane compound of formula (3) and a silane compound of formula (4), in an organic solvent in the presence of a catalyst and water:



(1)

wherein,

R is H, C_{1-3} alkyl, C_{3-10} cycloalkyl, or C_{6-15} aryl;

each of X_1, X_2, and X_3 is, independently, C_{1-3} alkyl, C_{1-10} alkoxy, or [[halo]] halogen, provided that at least one is alkoxy or [[halo]] halogen;

p is an integer from 3 to 8; and

m is an integer from 1 to 10;

$SiX_1X_2X_3X_4$ (3)

wherein,

each of X_1, X_2, X_3, and X_4 is, independently, C_{1-10} alkoxy, or [[halo]] halogen;

$RSiX_1X_2X_3$ (4)

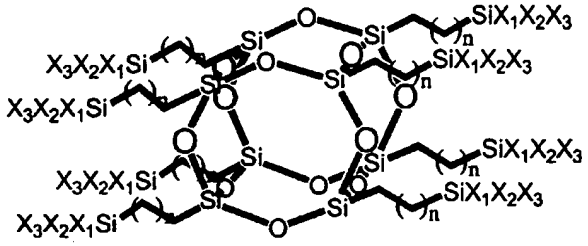
wherein,

R is H, C_{1-3} alkyl, C_{3-10} cycloalkyl, or C_{6-15} aryl; and

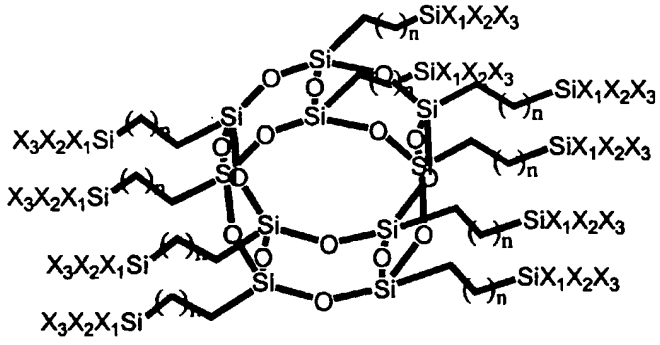
each of X_1, X_2, and X_3 is, independently, C_{1-3} alkyl, C_{1-10} alkoxy, or [[halo]] halogen, provided that at least one is alkoxy or [[halo]] halogen.

2. (Cancelled)

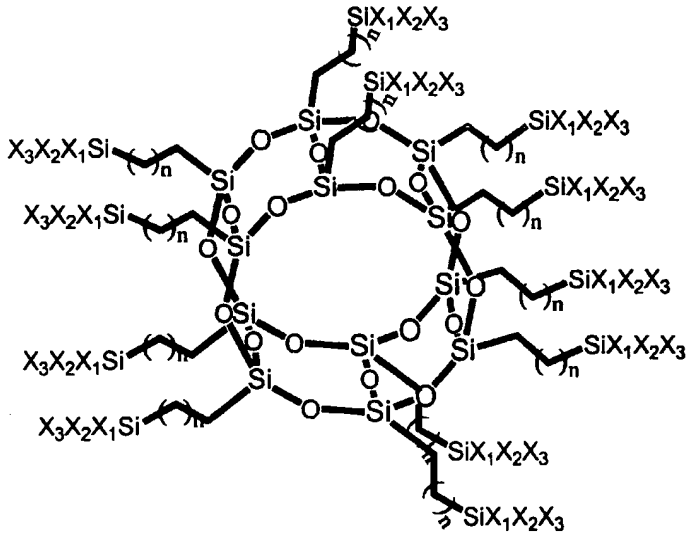
3. (New) A siloxane-based resin prepared by hydrolyzing and polycondensing a cage-shape siloxane compound of any of formulas (2a) through (2c), together with a silane compound of formula (3) and/or a silane compound of formula (4), in an organic solvent in the presence of a catalyst and water:



(2a)



(2b)



(2c)

in the above formulas (2a) through (2c),

each of X_1, X_2, and X_3 is, independently, C_{1-3} alkyl, C_{1-10} alkoxy, or halogen, provided that at least one is alkoxy or halogen; and

n is an integer from 1 to 12;

$$SiX_1X_2X_3X_4 \qquad (3)$$

wherein,

each of X_1, X_2, X_3, and X_4 is, independently, C_{1-10} alkoxy, or halogen;

$$RSiX_1X_2X_3 \qquad (4)$$

wherein,

R is H, C_{1-3} alkyl, C_{3-10} cycloalkyl, or C_{6-15} aryl; and

each of X_1, X_2, and X_3 is, independently, C_{1-3} alkyl, C_{1-10} alkoxy, or halo, provided that at least one is alkoxy or halogen.

4. (New) The siloxane-based resin of claim 1, wherein a molar ratio of the compound of formula (1) to the compound of formula (3) is between 99.9:0.1 and 0.1:99.9.

5. (New) The siloxane-based resin of claim 1, wherein a molar ratio of the compound of formula (1) to the compound of formula (3) is between 95:5 and 50:50.

6. (New) The siloxane-based resin of claim 1, wherein the resin contains 1-98 mol% of the compound of formula (1), 1-98 mol% of the compound of formula (3) and 1-98 mol% of the compound of formula (4).

7. (New) The siloxane-based resin of claim 3, wherein a molar ratio of the compound of formula (2a-2c) to the compound of formula (4) is between 99.9:0.1 and 0.1:99.9.

8. (New) The siloxane-based resin of claim 3, wherein a molar ratio of the compound of formula (2a-2c) to the compound of formula (4) is between 5:95 and 50:50.

9. (New) The siloxane-based resin of claim 3, wherein the resin contains 1-98 mol% of the compound of formula (2a-2c), 1-98 mol% of the compound of formula (3) and 1-98 mol% of the compound of formula (4).

10. (New) The siloxane-based resin of claim 1, wherein the resin has a molecular weight of 3,000 to 500,000.

11. (New) The siloxane-based resin of claim 1, wherein the resin has a molecular weight of 3,000 to 100,000.

12. (New) The siloxane-based resin of claim 3, wherein the resin has a molecular weight of 3,000 to 500,000.

13. (New) The siloxane-based resin of claim 3, wherein the resin has a molecular weight of 3,000 to 100,000.